

ANIMAL HEALTH INFORMATION

Biosecurity for Dairy Facilities

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WHY EVERY FARMER SHOULD BE UTILIZING PROVEN BIOSECURITY MEASURES:

Biosecurity minimizes the introduction of disease onto farms, limits the spread of disease already on farms, and reduces the risk of disease being carried between farms. Biosecurity controls transmission of disease-causing agents between animals, from animals to feed and from animals to equipment that may directly or indirectly contact other animals.

Biosecurity management practices prevent the spread of disease by minimizing the movement of biologic organisms and their vectors (viruses, bacteria, rodents, flies, etc.) onto and within your operation through animals, vehicles, visitors, personnel, pests, and other means.

While developing and maintaining biosecurity is difficult, it is the cheapest, most effective means of disease control available, and no disease prevention program will work without it.

Biosecurity may keep your farm protected from intentional or unintentional tampering with the farm, animals or equipment which may instigate a disease outbreak.

Management Practices

Key farm management practices prevent or reduce the following hazards to acceptable levels:

- **Biological Hazards** - You should have a plan for controlling risk from viruses, bacteria, parasites and other contaminants. These controls must be considered from the standpoint of: 1. Introduction to the farm; 2. Exposure and spread within the herd; 3. General and specific measures for immunization; and, 4. Minimizing the risk of export to other farms.
- **Chemical Hazards** - You should have a plan for handling and storage of pesticides, herbicides, feed additives, drugs, medicines and any potentially toxic materials.
- **Physical Hazards** - You should have a plan for animal handling and treatment to minimize trauma and maximize comfort and care. This includes ventilation, traffic flow, housing facilities and animal handling equipment.

Spread of Disease

Disease is generally spread in the following manner:

- The introduction of diseased cattle or healthy cattle incubating disease;
- Introduction of healthy cattle who have recovered from disease but are now carriers;
- Vehicles, equipment, clothing and shoes of visitors or employees who move between herds;
- Contact with inanimate objects that are contaminated with disease organisms;
- Carcasses of dead cattle that have not been disposed of properly;
- Feeds, especially high risk feeds which could be contaminated
- Impure water (surface drainage water, etc.);
- Manure handling and aerosolized manure and dust;
- Animals other than cattle (horses, dogs, cats, wildlife, rodents, birds and insects).



Three Major Components of Biosecurity

- Isolation
- Traffic control
- Sanitation.

When effectively managed these components meet the principle biosecurity objective of preventing or minimizing cross-contamination of body fluids (feces, urine, saliva, respiratory secretions, etc.) between animals, animals to feed and animals to equipment.

Isolation prevents contact between animals within a controlled environment. The most important step in disease control is to minimize commingling and movement of cattle, including all new purchases. New cattle arrivals should be kept separated, preferably in a separate building, from cattle already present for a period of at least 14 days. Animals already in a herd that become sick should be removed from the herd and placed in a separate building or at least a hospital pen. Coughing animals and animals with diarrhea can readily spread infectious agents to other cattle in the barn. Separate equipment should be used for caring for animals in hospital pens and manure and bedding should be handled separately to avoid cross-contamination.

Traffic control includes traffic onto your operation and traffic patterns within your operation. Traffic includes more than vehicles; all animals and people must be considered. Traffic control should stop or minimize contamination of milk, cattle, feed, feed handling equipment and equipment used on cattle or to process milk. Pit silos should not be accessible by non-feed handling equipment such as loaders used outside the feeding area or vehicles that travel outside the feed mixing and handling facility. No one should be allowed to drive onto the surface of a trench silo. The only equipment allowed should be the loader used for handling the feedstuff. In large pits, it may be acceptable to allow feed trucks to enter, provided they are loaded at least 100 feet away from the working face of the stored feed. Always use separate equipment for handling feedstuffs and handling manure. If not feasible, make sure equipment is cleaned of manure and disinfected before handling feed. Salmonellosis and Johne's disease are excellent examples of diseases readily spread by the shared use of equipment to handle feed and manure.

Sanitation addresses the disinfection of materials, people and equipment entering the operation and the cleanliness of the people and equipment on the operation. Sanitation prevents fecal contaminants from entering the oral cavity of cattle (fecal - oral cross contamination). All equipment that handles feed or is introduced into the mouth of cattle should be cleaned, including disinfection as appropriate, before use. Loaders used for manure or dead cattle handling must be cleaned thoroughly before using for feedstuff. It would be best to use different equipment.

Farm Security

The following examples should be considered and adapted as practical for your operation:

- Verify identity of any unknown contractors or vendors.
- Consider background checks on new employees.
- Restrict movement of visitors and their vehicles to areas where they cannot contaminate livestock.
- Have all visitors including regulatory inspectors wear visitor passes.
- Employees and/or personnel who move freely throughout the farm should watch for signs and report of sabotage to equipment; missing, broken or unprotected glass; indication of tampering with ingredients or packaging.
- Entry doors should be secure and locked.
- All medications should be secure.
- Protective equipment should be available, in place and functioning.



For more information or to discuss the biosecurity situation on your farm, call the
Massachusetts Department of Agricultural Resources, Division of Animal Health at 617/626-1795.